Message

From: EPAResearchCompass [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C1E8F11508674C3C954553A1129D33E5-EPARESEARCH]
Sent: 5/21/2019 6:50:08 PM
To: ORD-ALL Feds and NonFeds and RSLs [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2c735272eef941588aefd9a05ed28823-ORD-ALL Feds and NonFeds and RSLs]
CC: MaGowan, Maricruz [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8c4c1646850c47f6bdfb869db47c467c-MMagow02]; Harris-Young, Dawn [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1352e37302cf4eb78a64c69a108b46e5-Young, Dawn]; Barnett, Felicia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5773b45cae5142fe950861dd6146f1e9-Barnett, Felicia]; Carter, Bobbi [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f16dcafe85fc418ebd1651be2e8ab82d-Carter, Bobbi]; Gettle, Jeaneanne [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d8e72aa7e1894faea44006fd9f22b637-Gettle, Jeaneanne]; Taylor, Dawn [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b984d00ec06544e498ee5d986f97047c-Taylor, Dawn]; Klinger, Adam [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=346d5466632f4967adc7169c8d2ce4fd-Klinger, Adam]; Liljegren, Jennifer [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c7098a838cd34f75b8878571fe95d939-JLiljegr]; Pollard, Solomon [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=16cdf700f8024145847a2770b84abae3-Pollard, Solomon]; Clarage, Meredith [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ee9504437be545489f518710a5e80e68-Clarage, Meredith]; Crk, Tanja [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fccf9b9519484e8f88e90d3573253817-Tanja Crk]
Subject: Weekly Compass: May 21, 2019

EPA

WEEKLY compass

Weekly Update: 5/21/2019

Welcome to the Weekly Compass, your gateway to information about recent and upcoming ORD activities. If you have ideas for the Weekly Compass, please send them to the editors. To see past issues, visit the archive on ORD@work.

Weekly Note from Jennifer

ORDers— Chris Robbins, David Dunlap, and I enjoyed hosting the ECOS/Environmental Research Institute of the States (ERIS) Board meeting last week in Newport, Oregon. We appreciate the states' engagement in our strategic research planning and valuable input for continuing to advance our partnership efforts. Thank you to everyone involved, including our folks in Newport and Corvallis for all their efforts to make the meeting a success.

Be sure to cast your vote for the final Sammie Award, the People's Choice Award before May 30. Our very own William Boyes is a finalist for a 2019 Samuel J. Heyman Service Award in the category of Career Achievement. The Sammie Award is considered the "Oscar" of government service. Dr. Boyes' nomination is based on a lifetime of research on the neurotoxicity of environmental pollutants. His 35+ years of federal service have contributed to occupational and environmental standards for exposure to pesticides, organic solvents, biofuels, fuel additives, and engineered nanomaterials as well to major advances in the use of human cell lines to evaluate potential toxicity to sensitive eye tissues without the need for whole animal assays.

Finally, please remember to take the Employee Viewpoint Survey, which launched last week. All (non-term) federal employees should have received an email with the survey link from OPM with the subject: "The 2019 OPM FEVS: Empowering Employees. Inspiring Change." This survey provides valuable insights into our strengths, as well as the challenges we face in ensuring ORD, the EPA, and the Federal Government have an engaged, effective workforce. Thanks in advance for your feedback.

Enjoy the long weekend. —*Jennifer*

Quick Updates

- Don't forget to check out the open opportunities on Talent Hub!
- You can read the This Week @ EPA newsletter here.
- ORD is reorganizing for the first time in 25 years to better address the increasingly complex environmental challenges of the 21st century. Learn more about the reorg.

- Upcoming Webinars
  - Water Research Webinar: Multi-Source Remote Sensing for Assessment and Management of Surface Waters 5/22
  - EPA Tools and Resources Webinar: Nutrient Management in Coastal Communities 5/22
  - Computational Toxicology Communities of Practice: Rapid Tox Dashboard 5/23

Faces of ORD: NCEA's Jason Sacks

In the Lab:

Open STAR Request for Applications

EPA announced a new Science to Achieve Results (STAR) funding opportunity titled *Chemical Mechanisms to Address New Challenges in Air Quality Modeling (short title: Chemical Mechanisms)*. The RFA opened for applications on May 8 and will remain open through June 24, 2019. The research activities funded under this announcement are intended to improve the chemical mechanism component of air quality models relevant for ozone, particulate matter, and air toxics and ultimately advance the science underpinning air quality management strategies.

Mosquito Modeling Research Webinar

Last week, NERL's Mark Myer (Computational Exposure Division, ORISE) gave a webinar presentation to the Pandemic Prediction and Forecasting Science and Technology (PPFST) Working Group. The presentation, *Spatial Modeling of Mosquitoes and Disease for Vector Control Targeting*, was about Myer's modeling research on mosquito surveillance and vector-borne disease. The PPFST was established by the President's National Science and Technology Council to help develop federal infectious disease outbreak prediction and forecasting capabilities. The research Myer presented deals with the use of mosquito surveillance data collected by states, counties and municipalities help inform the predictors of mosquito population and disease. Those predictions can, in turn, help with aspects of health interventions such as the placement of mosquito traps, pesticide treatments and public health resource prioritization.

Technical Support to Newark, NJ

The City of Newark recently submitted a sampling plan to NJ Department of Environmental Protection (NJDEP) that will inform the decision on when to end their filter distribution to homes with lead service lines. NJDEP requested EPA assistance in reviewing and commenting on the plan. Darren Lytle and Mike Schock are providing the review of the plan. NRMRL has been providing ongoing assistance to Newark, including pipe scale analysis, as the City optimizes its water treatment practices to minimize lead service line corrosion.

Technical Support to Sandy, UT

Mike Schock has been advising the City of Sandy, Utah on technical support related to corrosion control and water treatment issues. The City was experiencing low drinking water pH due to high fluorination levels and is concerned of the resulting corrosion or other effects of low pH in the distribution system.

Superfund and State Support: Beede Waste Oil Superfund Site, Plaistow, NH

At the request of Region 1, NRMRL's Eva Davis met with representatives from Region 1 and the New Hampshire Department of Environmental Quality attended, as well as consultants for the Beede site. to discuss the progress of the steam injection remediation that is ongoing at the former Beede Waste Oil Superfund Site. This is part of a continuing effort to provide technical support for selection of a remedial technology, design of the remedial system, and technical input on the progress of the remediation. The 41-acre site is a former waste oil storage and recycling facility with contamination (volatile organic compounds, polychlorinated biphenyls, polyaromatic hydrocarbons, petroleum hydrocarbons, and lead) in the subsurface and groundwater.

Field work the use of Treated Effluent for Irrigation at Oklahoma State University (OSU), Chickasha, OK

NRMRL researchers conducting field work last week at OSU's South Central Research Station. Ken Jewell, Tiffany Maddox, Alyse Johansen, and Jessica Wilhelm are collecting groundwater samples for nutrient analysis at the EPA laboratory in Ada, OK. Researchers are evaluating the effects of indirect discharge of effluent as irrigation water in floodplain habitats. This work supports SSWR water reuse projects. The OSU agricultural research station uses effluent to irrigate in a floodplain corridor that historically experienced only dry land farming and NRMRL is researching the effects on groundwater or surface water biogeochemistry or hydrology from the use of treated effluent in the floodplain.

ORD Leadership's Visit to Corvallis

Right to left: Alan Thornhill, Deborah Jordan/DRA R9, Jennifer Orme-Zavaleta, Lisa Matthews, Duane James/R9 Laboratory Services and Applied Science Division Director, Chris Robbins, Mark McPherson, Lou D'Amico, and Jose Zambrana

Lake Guardian

The EPA vessel *Lake Guardian* has now begun its annual spring water sampling survey, stopping at 80 locations covering all five Great Lakes. A variety of instruments will be used to retrieve and analyze water samples taken from various depths. The test results will be entered into a long-term database. The Guardian has a crew of 14 contract employees. The number of scientists and researchers on board will fluctuate depending on the research being done. The 26-ft. research vessel *Tullibee* also is going back into the water this week. It is used in larger rivers and lakes, for cooperative studies with other agencies.

Wildland Fire Research Framework 2019-2022"

The recently released **Wildland Fire Research Framework 2019-2020** outlines ORD's priorities for conducting research to expand our understanding of wildland fires. A-E developed this Framework to better coordinate wildland-fire-related research across ORD's six national research programs. This document complements the 2019-2022

StRAPs currently being developed. It provides background information on wildland fire research as it relates to EPA's mission; a narrative of existing ORD wildland fire research; and a view of the landscape of potential future work in wildland fire research that is within the purview, expertise, and capacity of ORD. Additionally, this research framework outlines an approach for collaborative activities with other federal partners in cooperation with states, tribes, and communities. Christina Baghdikian (NHEERL) served as the primary author for this document as part of her recent detail with the A-E Team.

Research Collaboration With Office of Superfund Remediation and Technology Innovation (OSRTI)

This week, NHEERL's Gulf Ecology Division (GED) is collaborating with OSRTI on measurements of lead and arsenic in soils at some of Florida's Superfund sites. Matthew Jefferson, Environmental Engineer at OSRTI is visiting with NHEERL scientists in Gulf Breeze, Florida, to work on an XRF (X-Ray Fluorescence) Analyzer, which uses a non-destructive analytical technique to determine the elemental composition of soil and sediment samples by measuring the fluorescent X-ray emitted from a sample. This equipment will aid studies of lead and arsenic bioavailability at Superfund sites by allowing rapid measurements of total lead and arsenic in contaminated soils.

ORD Small Drinking Water Systems Meeting

The ORD and Region 6 2019 Small Drinking Water Systems Meeting will be held this week in Addison, Texas. This two day meeting will feature presentations from ORD scientists on a variety of topics related to small drinking water systems. Becky Keogh, President of the Environmental Council of the States (ECOS) and Director of Arkansas Department of Environmental Quality, will provide the states' perspective on the challenges and science needs of small drinking water systems.

ORD Program Support Coordinator Meeting in RTP

Last week, ORD's Program Support Coordinators hosted a visit to RTP by OSP's Kacee Deener (Acting Director), Susan Burden, and Walter Cybulski. They presented two seminars on "How You Can Inform EPA Policy," which generated good interest among RTP staff. Bill Russo and Tim Watkins gave welcoming remarks and introductions. Bill Russo, Ron Hines, Bill Fisher, and Kathryn Saterson also participated in NHEERL discussions with our guests.

Bill Russo poses with Susan Burden and Walter Cybulski in front of the prop now affectionately dubbed the TechTracker "Giant Mousepad."

Publication: White Paper on the Science Needs for Total Nitrogen Deposition Budgets

The National Atmospheric Deposition Program's (NADP's) Total Deposition Science Committee recently released a white paper, Science needs for continued development of total nitrogen deposition budgets in the United States. The lead authors for the paper are NRMRL's John Walker and Office of Air and Radiation's (OAR's) Gregory Beachley. Among the contributing authors are ORD's Helen Amos (S&T Policy Fellow) and Anne Rea; NERL's Jesse Bash, Ralph Baumgardner, Xi Chen, Havala Pye and Donna Schwede; Region 5's Justin Coughlin; NRMRL's Ryan Daly and Zhiyong Wu; OAR's Gary Lear (retired), Taylor Macy and Melissa Puchalski; OAQPS's Richard Scheffe (retired); and National Center for Environmental Economics' Tammy Thompson (S&T Policy Fellow). The paper deals with the state of the science for reactive nitrogen (Nr) deposition budgets in the U.S. These Nr deposition budgets are used to help develop the standards for limiting ecosystem exposure to nutrients and acidity. The report helps identify research needs to best develop future standards. The NADP is a cooperative effort between federal, state, tribal and local governmental agencies; educational institutions; private companies; and non-governmental agencies.

Publication: Human Breath Diagnostics Research Presented at 2019 Pittcon

This month, Journal of Breath Research published Contemporary human breath related topics: aerosols, saliva, and HR-MS bioinformatics from Pittcon 2019 by NERL's Joachim Pleil and Ariel Wallace, and Fabio Di Francesco (University of Pisa, Italy) and Wolfram Miekisch (Rostock University, Germany). This article reports on all the research related to human breath diagnostics presented at the 2019 Pittcon Conference and Exposition. Pittcon is an annual meeting on laboratory science with attendees from industry, academia and government. The 2019 Pittcon featured two main sessions related to breath diagnostics research. These were the symposium, *Human Exhaled Breath Aerosol (EBA) Sampling and Analysis: Applications for Clinical Diagnostics and Environmental Exposure Studies*, and the workshop, *Saliva Analysis: Non-Invasive Technologies for*

Drug Testing, Diagnosing Infection, and Assessing Inflammatory and Health Status. There were also numerous stand alone presentations and posters related to breath research.

Journal Article: Lead Removal Field Study

NRMRL's Darren Lytle, Mike Schock, and co-authors in Region 5 recently published the paper, "POU water filters effectively reduce lead in drinking water: a demonstration field study in Flint, Michigan" in the *Journal of Environmental Science and Health Part A*. This study tested the effectiveness of faucet-mounted point-of-use (POU) water filters for removing high concentrations of lead in drinking water from premise plumbing sources and lead service lines. The research concluded that properly installed, maintained, and certified POU filters can protect all populations by reducing lead in drinking water to levels that would not result in a significant increase in overall lead exposure.

Publication: Review of Electrochemical Biosensors for Cyanotoxins

This month, ACS Sensors published A Comprehensive Review: Development of Electrochemical Biosensors for Detection of Cyanotoxins in Freshwater by University of Cincinnati's Vasileia Vogiazi, Siddharth Mishra, Vesselin Shanov, William Heineman, and Dionysios Dionysiou, and NERL's Armah de la Cruz. Cyanobacteria harmful algal blooms are increasing in frequency, and cyanotoxins have become an environmental and public concern. This article is a review of studies and developments of electrochemical affinity biosensors for cyanotoxins. The article includes overviews of the current knowledge about the toxicity of cyanotoxins, important harmful algal bloom events and the advisories, guidelines and regulations related to cyanotoxins. The article also looks at methods for detecting cyanotoxins, including electrochemical biosensors. The authors then summarize the analytical performance of these biosensors and look at recent advances and future trends in the area. This review provides a resource to scientists and engineers in the field of electrochemical biosensors for detecting cyanotoxins in freshwater.

Grantee Publication: Chemical Exposure and Maternal Health

In addition to investigating the effects of environmental exposures on children's health, the EPA/NIEHS Children's Center at the University of California at San Francisco (UCSF) published a recent review article in *Reproductive Toxicology* looking at how chemical exposures influence a mother's health. The article, entitled, Heightened Susceptibility: A Review of How Pregnancy and Chemical Exposures Influence Maternal Health, reviewed epidemiologic literature on chemical exposures during pregnancy and three maternal outcomes: preeclampsia, gestational diabetes, and breast cancer. Researchers found that pregnancy can heighten susceptibility to environmental chemicals and women's health risks, although variations in study design and exposure assessment limited study comparability.

In the Office:

CompTox Chemicals Dashboard Demonstration

Tony Williams will be providing a demonstration of the CompTox Chemicals Dashboard during the RTP Library series on May 29 and 30. More information is available here.

Data Entry Guide

OSIM, in conjunction with several Labs, has created a Data Entry Guide posted on the ScienceHub Website. Check it out!

Mandatory Training

Security Awareness Training is now available on FedTalent. Please complete this mandatory training early!

2019 Federal Employee Viewpoint Survey (EVS)

The 2019 Federal Employee Viewpoint Survey launched last week. Employees should look for a survey link from the "Federal Employee Viewpoint Survey-EP <EVEP@opm.gov>" with the subject: "The 2019 OPM FEVS: Empowering Employees. Inspiring Change." The survey will be open through June 27, 2019.

Goatscaping at NHEERL's AED

NHEERL's Atlantic Ecology Division will again host goats and herders from Laurel Hill MicroFarm to perform their annual spring/summer maintenance of ORD landscape and pollinator habitat in Narragansett, Rhode Island. The goats will clear overgrown landscaping, particularly invasive and nuisance species without emissions and noise from gasoline engines that are traditionally used in landscaping. The goats also safely remove poison ivy and invasive species in the area. "Goat scaping" also protects pollinator habitat from invasive disturbances, creates space for new pollinator-friendly species to grow, and leaves areas free of vegetation to provide habitat for ground-nesting pollinators. This project demonstrates NHEERL's continued commitment to improving and increasing pollinator habitat and shows the neighboring community that we are operating the facility in an environmentally friendly fashion.

Association of Schools and Programs of Public Health (ASPPH) Interviews

EPA offices (HQ and Regions) may interview ASPPH Environmental Health Fellows for fall placement during the month of May. EPA established the partnership with ASPPH in 2003 to prepare the future public health workforce by providing masters and doctoral-level hands-on training experiences for recent public health graduates. Since its inception, 126 early-career public health professionals have trained at EPA through this program. For more information, contact Michaud.jayne@epa.gov.

Accolades:

Oregon Federal Executive Board (OR FEB) Honors NHEERL Researcher for Excellence in Community Engagement

NHEERL's Bob McKane was a finalist for the OR FEB 2019 Excellence in Community Engagement Award. Dr. McKane was nominated for tailoring his powerful, highly flexible ecohydrology predictive model, VELMA, to various ecosystems to answer highly complex questions about best management practices across large temporal and spatial scales to optimize multiple resource management objectives. These ecosystems include the Oregon coast, Oregon and Washington river systems, and the Puget Sound. On May 28,

2019, NHEERL's Darryl Marois will present a webinar about his work with VELMA on the Oregon coast and how the Oregon Department of Fish and Wildlife (ODFW) and others can use VELMA to support policy and land management decisions for salmon habitat restoration and other priorities. Staff from OFDW, the Tillamook (Oregon) Estuaries Partnership, and the National Oceanic and Atmospheric Administration are expected to participate in the webinar.

In the News:

Oil Spill Podcast

NRMRL's Robyn Conmy, along with Jon Gulch and Jeff Kimble (On-Scene Coordinators from Region 5) were interviewed for a podcast for the Institute on Science for Global Policy (ISGP). The podcast, hosted by Aubrey Paris, was focused on EPA's role in oil spill planning, response, remediation and research. The podcast recording is now available on the web.

In the Community:

Adopt-a-Class Field Trip and Tours at EPA-Cincinnati

Last week, EPA-Cincinnati's Adopt-a-Class volunteer group hosted 19 students and their teacher for a field trip to the EPA facility. The students visited the saliva antibodies lab, the oil spills lab, and participated in a safety and handwashing demo with the SHEM Team. The students also watched EPA videos during their breakfast and did a scavenger hunt with their mentors after lunch. This was the final event for the school year and participating mentors include scientists and employees from NRMRL, NHSRC, SSWR, OSIM, OARS, and Contracts.

EPA Participates in St. Louis River Quest

Last week the St. Louis River Quest drew 1,500 sixth graders from 13 schools in the Duluth, Minnesota, area. The students traveled through a dozen hands-on educational stations, aboard the *Vista Star* and in South Pioneer Hall at the Duluth Entertainment Convention Center. Carrying printed passports to document their stops, they learned about the St. Louis River ecosystem and related commercial, industrial and recreational activities. During the 2.5-hour excursions, students were introduced to topics ranging from pollution prevention and aquatic invaders, to commercial shipping, boating, and beach safety. Learning stations on *Vista Star* were staffed by: U.S. Army Corps of Engineers; EPA; Lake Superior National Estuarine Research Reserve; Minnesota Sea Grant; Great Lakes Aquarium and the St. Louis River Alliance. NHEERL Mid-Continent Ecology Division volunteers worked at the U.S. EPA station - Pollution & the River Watershed - throughout the week.

"Meet the Scientists" Laboratory Tour

Yesterday, NHEERL's Atlantic Ecology Division hosted approximately 85 sixth graders, their teachers, and parent chaperones for the annual Davisville Middle School "Meet the Scientists" laboratory tour in Narragansett, Rhode Island. Visitors viewed marine fish and mysid development displays, local marine organisms, and a fish-on-ice display. Scientists Denise Champlin, Walter Berry, Anne Kuhn, Rick McKinney, and Alana Hanson led the tour.

EPA-RTP STEM Outreach Program

Yesterday, EPA-RTP's Community Engagement and STEM Education Program led a hands-on activity for EcoBloom at the Durham Public Schools Hub Farm in Durham, N.C. EcoBloom is a Hub Farm program that hosts 5th grade students from twelve different schools over two months for forest ecology, pollinators, and watershed activities to reinforce concepts learned in the classroom in preparation for end-of-year testing.

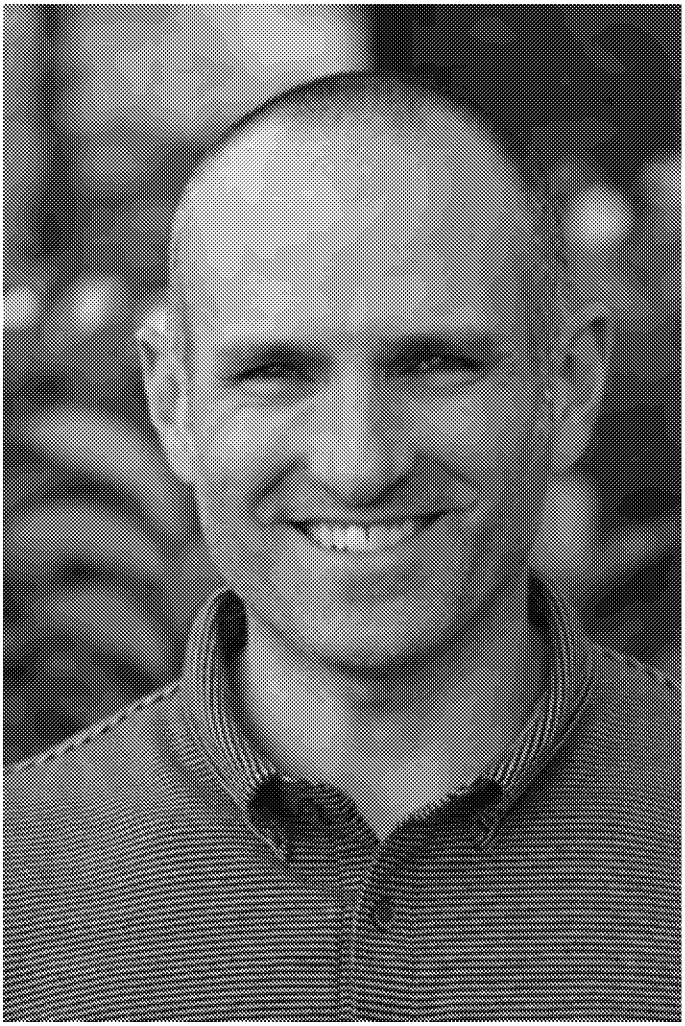
Today, the Program will participate in the Citizen Schools Catalyst Program at Carrington Middle School in Durham. Citizen Schools partners public middle schools in low-income communities with local professionals to provide enrichment by engaging students in active learning during the school day for 4-5 sessions each semester.

On Wednesday, the Program will present a hands-on activity about recycling to K-5 students at Easley Elementary School in Durham.

On Thursday, the Program will:

- lead its 17th biweekly hands-on STEM activity for the afterschool program at Holt Elementary School in Durham and
- host an EPA booth about EPA careers at Athens Drive High School's STEMposium in Raleigh, N.C.

Faces of ORD: NCEA's Jason Sacks



Name: Jason Sacks

Job/Position: Epidemiologist

L/C/O or Program: NCEA-RTP

1. When did you start at EPA?

I started at EPA in January 2008.

2. What's the most interesting thing about your job?

Although I love my role in developing Integrated Science Assessments (ISAs) to support the National Ambient Air Quality Standards (NAAQS) review process, it's the depth and breadth of scientific and technical support activities that spawn from my contributions on the ISAs that I find most interesting. I never know on a weekly basis what questions I'll have to respond to or invitations for a presentation I'll receive from anyone from a state

agency to an international organization. It definitely keeps me on my toes and also shows me the impact our work has on the broader public health and scientific communities.

3. What's the most interesting thing in your workspace?

The pictures of my kids, Nora (7) and Mae (4), and random pieces of their artwork.

4. What's your favorite thing to do (besides come to work)?

Spending time outside with my family. I like to run and golf, but running has taken precedence over the last few years. I've run 1-2 marathons a year for the last five years.

5. Name two things on your bucket list?

(1) Play golf at Augusta National.

(2) Run an international marathon.

6. If you could have one superpower, what would it be?

To stop time. I always joke with my kids that I want them to stay small because they are growing up too fast. Maybe this would allow me to steal a few extra minutes with them before they get too big.

7. What is your favorite film?

This is a tough one, the first thing that popped into my head was Field of Dreams. What's not to like about your baseball heros walking out of the corn fields to play on a baseball diamond at your house?

8. Describe any steps you take in your daily life to protect the environment.

The biggest step we've taken is having solar panels put on our house a few years ago. Besides that we try to instill things in our daily lives that our kids will notice that are not difficult and can make an impact such as using reusable bags for snacks whenever possible, having a compost bin, and recently my wife purchased glass straws to take to restaurants to reduce the amount of plastic straws we use.